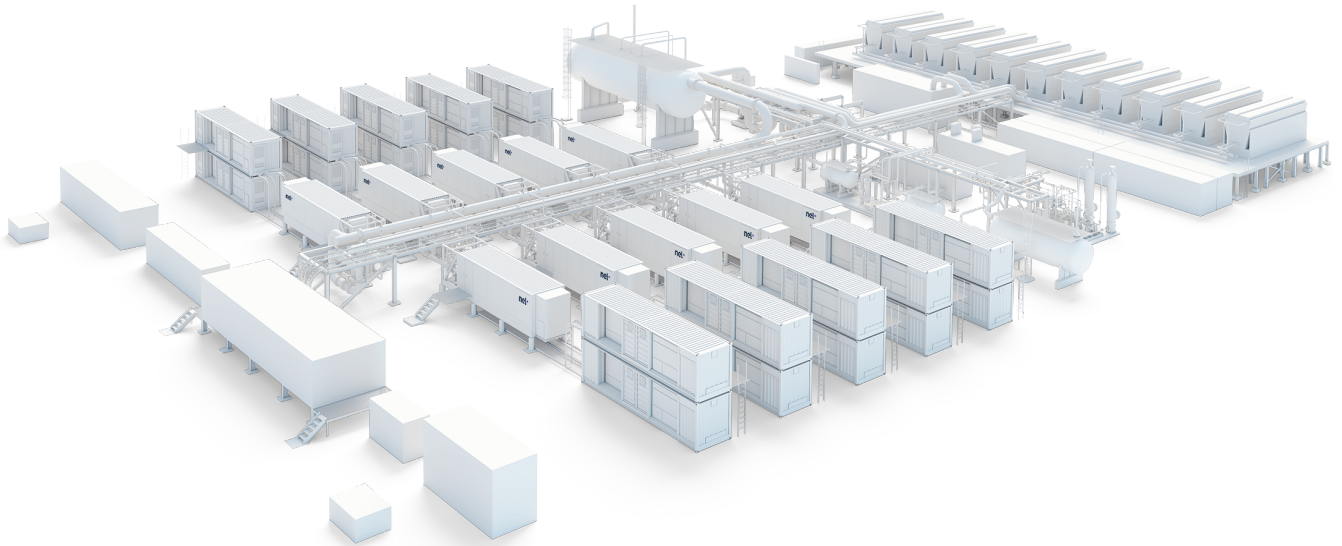




PEM 100

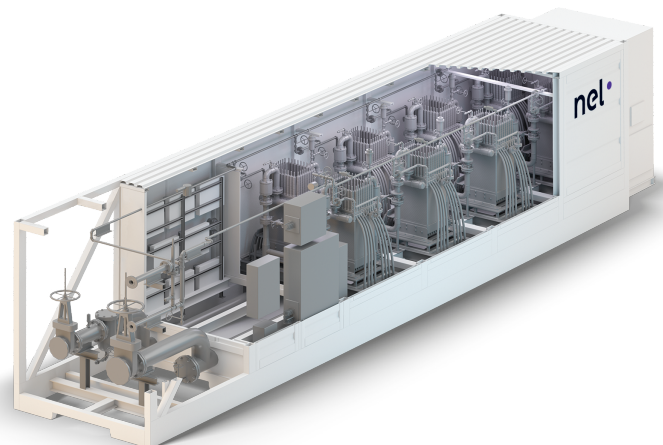
Proton Exchange Membrane (PEM) 100 MW Standardized Plant Solution



100 MW PEM electrolysis plant featuring ten containerized PEM stack modules (PSM).

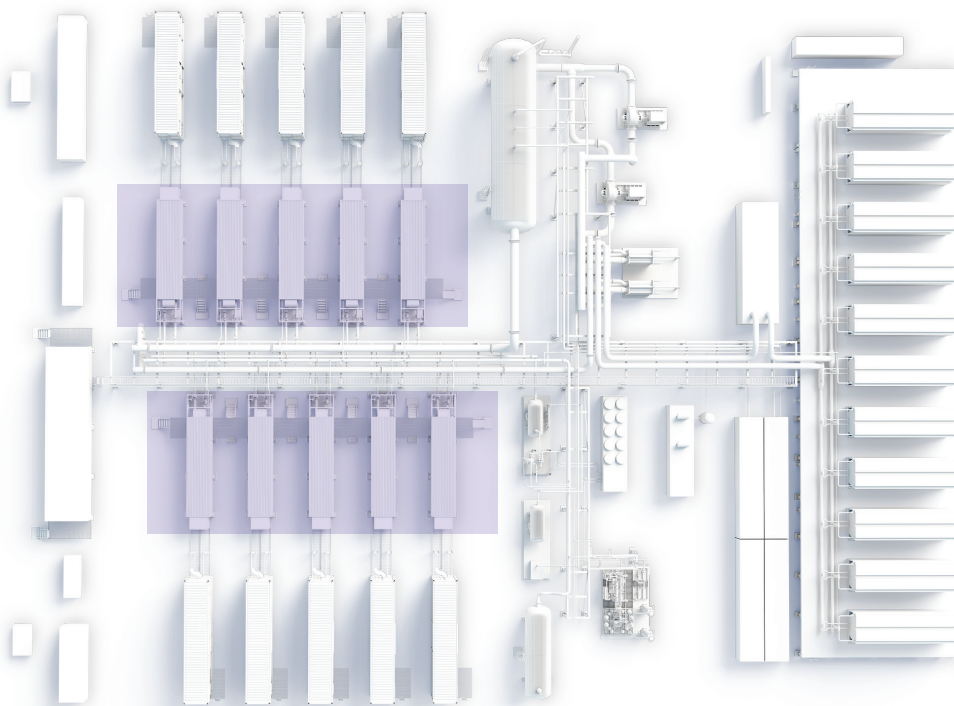
The PEM 100 is a complete standardized electrolyser plant design, in a cost-optimized configuration. The design approach integrates ten containerized electrolyser stack modules into a consolidated balance of plant to reduce risk and create a standard building block for larger plants.

- Industry leading reliability and cell stack life
- Containerization eliminates need for a building
- Pre-integrated modules for reduced EPC scope
- Backed by long term performance guarantees
- Largest installed base globally
- Third party certified and field-proven safety
- Lowest total cost of hydrogen
- Comprehensive process design package (PDP) available for reduced FEED cost and schedule



Cutaway view of containerized 10 MW PSM.

MODEL	PEM 100
Class	100 MW
Electrolyte	Proton Exchange Membrane (PEM) – caustic-free
HYDROGEN PRODUCTION	
Nominal Production Rate Nm ³ /h (m ³ /h @ 0°C, 1 bar) kg/24 h	20,200 Nm ³ /h 43,000 kg/24 h
Delivery Pressure – Nominal	30 barg (435 psig); full differential pressure H ₂ over O ₂
Nominal Power Consumption at Stack per Unit of H ₂ Gas Produced at 100% Capacity ¹	4.72 kWh/Nm ³ 53.2 kWh/kg
Nominal Power Consumption by Plant (Stack + BoS + Bop + Cooling) per Unit of H ₂ Gas Produced at 100% Capacity ¹	5.0 kWh/Nm ³ 56.7 kWh/kg
Purity (with optional dryer)	99.999+%
Turndown Range	10 to 100%
SITE AND UTILITIES	
Standard Siting Location	Outdoors
Ambient Temperature ²	-30 to 50°C (-22 to 122°F)
Altitude Range ³	Sea level to 1,000 m (3,281 ft)
Electrical Requirements	35 kV, 50/60 Hz
Plant Dimensions W x D ⁴	96 m x 69 m (315 ft x 226 ft)



100 MW PEM electrolysis plant featuring ten containerized PEM stack modules (PSM).



Specifications are subject to change. Please contact Nel Hydrogen for solutions to best fit your needs.

¹ Beginning of life and dependent on configuration and operating conditions.

² Ambient temperature requirement for PSM containerized electrolyser stack modules only.

³ Consult Nel Hydrogen Applications Engineering Department for installations above 1,000 m (3,281 ft).

⁴ Site conditions may cause the design to vary.